

### **REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

New claim 17 has been added. After amending the claims as set forth above, claims 1-17 are now pending in this application.

#### **Information Disclosure Statement**

Applicants gratefully acknowledge the signed and initialed copy of the PTO/SB/08 form filed with an Information Disclosure Statement by Applicants on June 2, 2006. However, reference A6 was not initialed. Applicants note that a concise explanation about the content of the information for a reference not in the English language may be either separate from or incorporated in an Applicant's specification. See 37 C.F.R. 1.98(a)(3)(i) and M.P.E.P. § 609.04(a), Part III. In this case, reference A6 is discussed on page 3, lines 5-9, of Applicant's specification. Therefore, the requirements for a concise explanation have been met. The Office is required to consider all citations submitted in compliance with the rules. See M.P.E.P. § 609.05(b). Applicants respectfully request consideration of reference A6, and a signed and initialed copy of the PTO/SB/08 form with the next Office correspondence.

#### **Rejection under 35 U.S.C. § 112**

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 1 has been amended to overcome this rejection. Reconsideration and withdrawal of this rejection is respectfully requested.

#### **Rejections under 35 U.S.C. § 103**

Claims 1-6 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,207,312 to Wynne *et al.* (hereafter "Wynne") in view of U.S. Pub. No.

2003/0008194 to Cargnelli *et al.* (hereafter “Cargnelli”). This rejection is respectfully traversed.

Wynne discloses a polymer electrolyte membrane fuel cell that includes a membrane electrode assembly 10 and current collector/reactant flow field plates 20, 22. See col. 4, lines 43-46, of Wynne. A fuel flow plate 20 includes fuel inlet channels 34 extending from an inlet port 30 and fuel outlet channels 36 extending from an outlet port 32. See col. 4, lines 63-65 of Wynne. An oxidant flow plate 22 includes oxidant inlet channels 46 extending from an oxidant inlet port 42 and oxidant outlet channels 44 extending from oxidant outlet port 40. See col. 4, line 65, to col. 5, line 1, of Wynne.

However, Wynne does not disclose or suggest a solid oxide fuel cell that includes, among other things, a plurality of gas supply branch flow passages branched off from one of a plurality of gas supply flow channels, the plurality of gas supply branch flow passages terminating at a plurality of blowout ports, respectively, formed within a surface of an associated one of a plurality of first current collector layers which is disposed adjacent the electrode section of an associated one of the plurality of electric power-generating elements, and a plurality of gas exhaust flow channels formed inwardly from the surface of the associated one of the plurality of first current collector layers, wherein the plurality of gas exhaust flow channels are configured to receive consumed gas that is pushed by a fresh supply of gas out of the blowout ports and to dissipate the consumed gas over an entire area of the surface of the associated one of the plurality of first current collector layers, as recited in amended claim 1.

For example, Wynne does not disclose or suggest a plurality of gas supply branch flow passages that branch off from one of a plurality of gas supply flow channels and that terminate at a plurality of blowout ports, as recited in claim 1. Nor does Wynne disclose or suggest a plurality of gas exhaust flow channels that are configured to receive consumed gas that is pushed by a fresh supply of gas out of the blowout ports and to dissipate the consumed gas over an entire area of the surface of an associated one of a plurality of first current collector layers, as recited in amended claim 1.

As discussed on page 11, line 15, to page 12, line 2, of Applicants' specification, a solid oxide fuel cell can be arranged so that reacted gases can be pushed out by supplied fresh gases so that the reacted gases are exhausted, which can cause a macro gas concentration gradient in a surface of the electric power generating elements to be eliminated. This can advantageously homogenize the gas concentration at the surface of the electric power generating elements and adequately preheat gases supplied to the surface at uniform concentrations so that no supplied fresh gases mix with reacted gases.

Cargnelli discloses a manifold for a fuel cell system. However, the teachings of Cargnelli does not remedy the deficiencies of Wynne.

The combination of Wynne and Cargnelli does not provide a proper ground of rejection under 35 U.S.C. § 103(a) because the combination does not disclose or suggest all of the features of claim 1. The Supreme Court in *KSR Int'l Co. v. Teleflex, Inc.* has not removed the requirement that a prior art reference, or references when combined, must teach or suggest all of the claim limitations. In fact, *KSR* emphasized cases in which all features were found in prior art references.

For example, the Court noted three cases: *United States v. Adams*, 383 U.S. 39 (1966), *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969), and *Sakraida v. AG Pro, Inc.*, 425 U.S. 273 (1976), which all dealt with the issue of whether the combination of known elements would have been obvious. The Court stated that "*Sakraida* and *Anderson's-Black Rock* are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions." 127 S.Ct. 1727, 1740 (2007). In another example, the *KSR* Court stated that "[a]s is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the art...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed invention does." *Id.* at 1741. Such statements reinforce the concept that all elements of a claim have to be known in the art before they are determined to be combinable or not. Furthermore, the Court in *KSR*

stated that a reason to combine elements should be made explicit. *Id.* at 1740-41.<sup>1</sup> Indeed, the Court approvingly cited *In re Kahn*, 441 F.3d 977 (Fed. Cir. 2006), for requiring an articulated reason. *Id.* at 1741.<sup>2</sup>

In addition, the PTO's examination guidelines for determining obviousness in view of *KSR*<sup>3</sup> suggests that all elements (when the references are combined) need to be known in the art to support a conclusion of obviousness.<sup>4</sup>

The combination of Wynne and Cargnelli does not provide a proper basis for a conclusion of obviousness because the combination of Wynne and Cargnelli does not disclose or suggest all of the features of claim 1. Reconsideration and withdrawal of this rejection is respectfully requested for at least the reasons set forth above.

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<sup>1</sup> "Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit." *Id.* at 1740-41.

<sup>2</sup> "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" *Id.* at 1741.

<sup>3</sup> "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex, Inc.*" (Pages 57526-57535 of the Federal Register, Vol. 72, No. 195.)

<sup>4</sup> For example, if a finding that all claim elements were known in the prior art cannot be made, then the rationale of combining prior art elements according to known methods cannot be used. (Page 57529.) If a finding that the substitution of one known element for another known element (which suggests a teaching of the known elements in the prior art) cannot be made, then the rationale of simple substitution of one known element for another cannot be used. (Page 57530.) If a finding that a method of enhancing a particular class of devices, methods or products based upon the teaching of such an improvement in other situations cannot be made, then the rationale of the use of known techniques to improve similar devices in the same way cannot be used. (Page 57530.) If a finding that a particular known technique was recognized in the art (which suggests a teaching of the technique in the prior art) cannot be made, then the rationale of applying a known technique to a known device, method, or product ready for improvement cannot be used. (Page 57531.) If a finding that there are known options within the grasp of a person of ordinary skill (which suggests a teaching of the known options in the prior art) cannot be made, then the rationale of obvious to try cannot be used. (Page 57532.) If a finding that design incentives or other market forces could have prompted one of ordinary skill to vary the prior art in a predictable manner (which suggests a teaching of the predictable manner in the prior art) cannot be made, then the rationale of the known work in one field of endeavor may prompt variations of it for use in either the same field or a different one cannot be used. (Page 57533.) If a finding that a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention (which suggests that the prior art when combined teaches all the elements of the claimed invention) cannot be made, then the rationale of some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify or combine prior art reference teachings cannot be used. (Page 57534.)

Claims 7, 8, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wynne and Cargneli as applied to claim 1, and further in view of U.S. Patent No. 5,922,485 to Enami (hereafter "Enami"). This rejection is respectfully traversed. Enami fails to remedy the deficiencies of Wynne and Cargneli as discussed above in regard to independent claim 1, from which claims 7, 8, and 10 depend. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wynne and Cargneli as applied to claim 1, and further in view of U.S. Patent No. 6,274,258 to Chen (hereafter "Chen"). This rejection is respectfully traversed. Chen fails to remedy the deficiencies of Wynne and Cargneli as discussed above in regard to independent claim 1, from which claim 9 depends. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 11-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wynne and Cargneli as applied to claim 1, and further in view of Enami and U.S. Pub. No. 2003/0219639 to Edlund (hereafter "Edlund"). This rejection is respectfully traversed. Enami and Edlund fail to remedy the deficiencies of Wynne and Cargneli as discussed above in regard to independent claim 1, from which claims 11-13 depend. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wynne and Cargneli as applied to claim 1, and further in view of U.S. Patent No. 6,224,993 to Hartvigsen *et al.* (hereafter "Hartvigsen") and U.S. Patent No. 5,932,368 to Batawi *et al.* (hereafter "Batawi"). This rejection is respectfully traversed. Hartvigsen and Batawi fail to remedy the deficiencies of Wynne and Cargneli as discussed above in regard to independent claim 1, from which claim 14 depends. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wynne and Cargneli as applied to claim 1, and further in view of Batawi. This rejection is respectfully traversed. Batawi fails to remedy the deficiencies of Wynne and Cargneli as discussed above

in regard to independent claim 1, from which claim 15 depends. Reconsideration and withdrawal of this rejection is respectfully requested.

**New Claim**

New claim 17 has been added. Claim 17 includes language similar to amended claim 1. Therefore, claim 17 is allowable over the prior art for at least the reasons discussed above.

**Conclusion**

Applicant submits that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

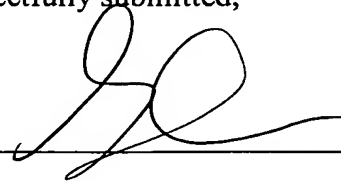
Respectfully submitted,

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3/27/08

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